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L6               STR
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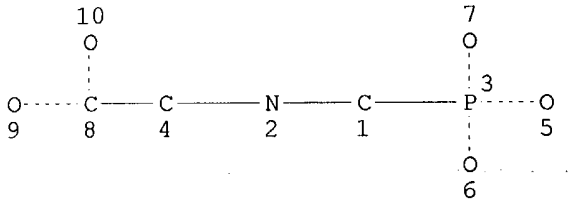


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DEFAULT ECLEVEL IS LIMITED

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RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  10

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L15       43666 SEA FILE=HCAPLUS ABB=ON  PLU=ON  HERBICIDES+PFT/CT
L17         786 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13 AND L15
L18           5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 AND (TENSIO ACTIV? OR
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L19          11 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 OR L18

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L19  ANSWER 1 OF 11  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2003:952227  HCAPLUS
DOCUMENT NUMBER:          140:351999
TITLE:                    Comparison of synergism of nine adjuvants to
                          glyphosate
AUTHOR(S):                Zhu, Jinwen; Zhu, Guonian; Liu, Qiankai
CORPORATE SOURCE:         Institute of Pesticide and Environmental Toxicology,
                          Zhejiang University, Hangzhou, 310029, Peop. Rep.
                          China
SOURCE:                   Nongyao (2003), 42(2), 19-21
                          CODEN: NONGFP; ISSN: 1006-0413
PUBLISHER:                Nongyao Bianjibu
DOCUMENT TYPE:            Journal
LANGUAGE:                 Chinese
AB   Alligator weed [Alternanthera philoxeroides (Mart.) Griseb.] was treated
     by glyphosate isopropylamine salt with nine adjuvants, resp. The results
     indicated that adjuvants UC-12, TL-800, JFC, Tween-20 were most effective.
     Their inhibition on fresh weight was increased by 6-20%, inhibition in root
     regeneration was increased by 8-12% when glyphosate was mixed with these
     adjuvants. The efficacy of reducing surface tension
     of glyphosate solution was by this order: Nonlu500 > 904 > APG > JFC > TL800
     > UC-12 > Tween-20 > 961 > SD. There was no close relationship between
     synergism of adjuvants and surface tension reducing
     level.
CC   5-3 (Agrochemical Bioregulators)
ST   glyphosate adjuvant synergism surface tension
     alligator weed control; Alternanthera control glyphosate adjuvant
     synergism surface tension
IT   Alternanthera philoxeroides
       Surface tension
     Surfactants
     Weed control
       (synergism of adjuvants to glyphosate)
IT   38641-94-0, Glyphosate isopropylamine salt
     RL: AGR (Agricultural use); BSU (Biological study,
     unclassified); BIOL (Biological study); USES (Uses)
       (synergism of adjuvants to glyphosate)
IT   38641-94-0, Glyphosate isopropylamine salt
     RL: AGR (Agricultural use); BSU (Biological study,
     unclassified); BIOL (Biological study); USES (Uses)
       (synergism of adjuvants to glyphosate)
RN   38641-94-0  HCAPLUS
CN   Glycine, N-(phosphonomethyl)-, compd. with 2-propanamine (1:1) (9CI)  (CA
     INDEX NAME)
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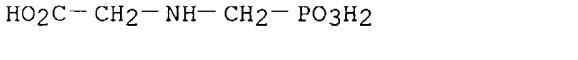
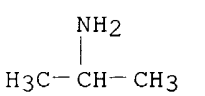
CM 1

CRN 1071-83-6
CMF C3 H8 N O5 P



CM 2

CRN 75-31-0
CMF C3 H9 N



L19 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:909438 HCAPLUS
DOCUMENT NUMBER: 138:282708
TITLE: Tank-mix adjuvants for agrochemicals
AUTHOR(S): Gauvrit, Christian
CORPORATE SOURCE: Laboratoire de Phytopharmacie INRA BP 86510, Dijon, 21065, Fr.
SOURCE: Agro-Food-Industry Hi-Tech (2002), 13(4), 42-46
CODEN: AIHTEI; ISSN: 1120-6012
PUBLISHER: TeknoScienze
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review on agrochem. adjuvants. Tank-mix adjuvants are increasingly used in Europe, mainly with herbicides. The expected benefits are dose reduction, regularization of efficacy and drift limitation. According to their modes of action, three main families can be outlined: surfactants, oils and salts. Surfactants lower the **surface tension** of the sprayed liquid and can also promote the foliar uptake of active ingredients (AIs). Oils are above all "penetrating agents" compatible mostly with lipophilic AIs, such as specific graminicides. Salts are preferably hygroscopic and are useful with hydrophilic AIs, for example bentazone, glufosinate or glyphosate.

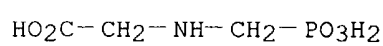
CC 5-0 (Agrochemical Bioregulators)

IT **Herbicides**
(tank-mix adjuvants for)

IT **1071-83-6**, Glyphosate. 25057-89-0, Bentazone 51276-47-2, Glufosinate
RL: **AGR (Agricultural use)**; BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(salts as tank-mix adjuvants for)

IT **1071-83-6**, Glyphosate.
RL: **AGR (Agricultural use)**; BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(salts as tank-mix adjuvants for)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:255992 HCAPLUS
DOCUMENT NUMBER: 136:258729
TITLE: Agrochemical fungicidal and herbicidal composition containing activity-enhancing adjuvants with reduced ecotoxicity
INVENTOR(S): Bean, Michael John; Ramsay, Julia
PATENT ASSIGNEE(S): Syngenta Limited, UK
SOURCE: PCT Int. Appl., 17 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002026036	A1	20020404	WO 2001-GB4051	20010910
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2001086066	A5	20020408	AU 2001-86066	20010910
EP 1326493	A1	20030716	EP 2001-965422	20010910
EP 1326493	B1	20040519		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001014274	A	20031209	BR 2001-14274	20010910
JP 2004509905	T2	20040402	JP 2002-529872	20010910
NO 2003001439	A	20030528	NO 2003-1439	20030328

PRIORITY APPLN. INFO.: GB 2000-23912 A 20000929
WO 2001-GB4051 W 20010910

AB An agrochem. composition having improved efficacy and reduced ecotoxicity comprising: (i) an agrochem. active ingredient, such as fungicide or herbicide, (ii) an alkyl amine alkoxylate adjuvant {[H(OR)a]}[H(OR)a']NCH2CH(CH2CH3)(CH2)3CH3(R = (un)branched C2-C4 alkylene(s); a + a' = 1-30) and salts and amine oxides thereof, and (iii) a secondary adjuvant a 0.5 % by weight solution in water of which has a dynamic **surface tension** of no more than 50mNm-1 at 40ms.

IC ICM A01N025-30
ICS A01N033-16; A01N057-20; A01N047-02; A01N039-02; A01N039-04
CC 5-3 (Agrochemical Bioregulators)

ST adjuvant amine fungicide herbicide ecotoxicity **surface tension**
IT Fungicides
Herbicides
(activity-enhancing adjuvants with reduced ecotoxicity for fungicidal and herbicidal formulations)
IT 94-74-6, MCPA **1071-83-6**, Glyphosate 16484-77-8, Mecoprop-P 51276-47-2, Glufosinate 72178-02-0, Fomesafen
RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
(activity-enhancing adjuvants with reduced ecotoxicity for herbicidal formulations containing)
IT **1071-83-6**, Glyphosate
RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
(activity-enhancing adjuvants with reduced ecotoxicity for herbicidal formulations containing)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:208476 HCAPLUS
DOCUMENT NUMBER: 136:365276
TITLE: Dynamic **surface tension** of selected nonionic agricultural surfactants at surface ages relevant to component processes in spray application
AUTHOR(S): Cooper, Jane A.; Fox, Robert D.; Dexter, Robin D.; Bukovac, Martin J.
CORPORATE SOURCE: Entomology Department, Ohio State University/OARDC, Wooster, OH, 44601, USA
SOURCE: ASTM Special Technical Publication (2001), STP 1414(Pesticide Formulations and Application Systems: A New Century for Agricultural Formulations, Twenty First Volume), 50-60
CODEN: ASTTA8; ISSN: 0066-0558
PUBLISHER: American Society for Testing and Materials
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Dynamic **surface tension** data for selected nonionic surfactants, pesticides and other miscellaneous liqs. are presented. **Surface tension** was measured using the oscillating jet technique at surface ages ranging from 0.5 to 7 ms. These early measurements are particularly important since new surfaces are being rapidly created, and they represent the time frame of spray droplet formation and impaction processes.
CC 5-6 (Agrochemical Bioregulators)
Section cross-reference(s): 46
ST **surface tension** surfactant pesticide spray
IT Paraffin oils
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(Crop oil; dynamic **surface tension** of spray

additives for agricultural formulations)

IT Alcohols, uses
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(C11-14-isoalcs., C13-rich, ethoxylated; dynamic **surface tension** of agricultural surfactants for spray formulations)

IT Sulfonic acids, uses
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(C14-16-1-alkenesulfonic, sodium salts; dynamic **surface tension** of agricultural surfactants for spray formulations)

IT Agrochemical formulations
(adjuvants; for agricultural spray formulations; dynamic **surface tension** of)

IT Bacillus thuringiensis
(dynamic **surface tension** of agricultural pesticides for spray formulations)

IT Pesticide formulations
Surface tension
Surfactants
(dynamic **surface tension** of agricultural surfactants for spray formulations)

IT Pesticides
Solvents
(for agricultural spray formulations; dynamic **surface tension** of)

IT 12427-38-2, Manzate 17804-35-2, Benlate **38641-94-0**, Roundup Ultra 51630-58-1, Pydrin 52645-53-1, Ambush 88671-89-0, Nova
RL: **AGR (Agricultural use)**; PRP (Properties); BIOL (Biological study); USES (Uses)
(dynamic **surface tension** of agricultural pesticides for spray formulations)

IT 9002-93-1, Triton X-45 9003-11-6, Regulaid 9005-64-5, Tween 20 9014-85-1, Surfynol 440 9016-45-9, Igepal CO-530 11097-66-8, X-77 27306-78-1, Silwet L-77 53795-57-6, Triton CS-7 61827-42-7, Rhodasurf DA-530 143350-75-8, Kinetic 152987-15-0, Induce 176776-21-9, Soprophor FLK 187820-94-6, Surfynol 485W
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(dynamic **surface tension** of agricultural surfactants for spray formulations)

IT 13558-31-1D, derivs.
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(dynamic **surface tension** of compds. used in agricultural spray formulations)

IT 7732-18-5D, Water, copper ionized, properties
RL: PRP (Properties)
(dynamic **surface tension** of compds. used in agricultural spray formulations)

IT 64-17-5, Ethyl alcohol, uses 67-63-0, Isopropanol, uses
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(dynamic **surface tension** of solvents for agricultural spray formulations)

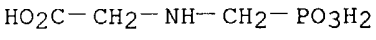
IT 58318-77-7, Nalcotrol 114797-22-7, Bond (latex) 147335-78-2, Sunit II
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(dynamic **surface tension** of spray additives for agricultural formulations)

IT **38641-94-0**, Roundup Ultra
RL: **AGR (Agricultural use)**; PRP (Properties); BIOL (Biological study); USES (Uses)

(dynamic **surface tension** of agricultural pesticides for spray formulations)
RN 38641-94-0 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, compd. with 2-propanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 1071-83-6
CMF C3 H8 N O5 P



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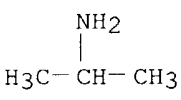
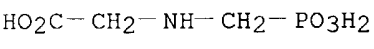
CRN 75-31-0
CMF C3 H9 N



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:15834 HCAPLUS
DOCUMENT NUMBER: 132:147950
TITLE: N-acylsarcosinate: a safe, effective and eco-friendly adjuvant for glyphosate
AUTHOR(S): Crudden, J. J.; Cullen, B. A.; Emmons, C. W.; Steffel, J.
CORPORATE SOURCE: Hampshire Chemical Corporation, A subsidiary of The Dow Chemical Company, Nashua, NH, USA
SOURCE: Brighton Conference--Weeds (1999), (Vol. 1), 237-242
CODEN: BCWEFI
PUBLISHER: British Crop Protection Council
DOCUMENT TYPE: Journal
LANGUAGE: English
AB N-acylsarcosinates have a long history of safe use in personal care products such as shampoo and toothpaste. Glyphosate formulations containing sarcosinate as the sole adjuvant were shown to exhibit excellent efficacy at low surfactant concentration and to reduce the **surface tension** of the system to below 25 mN m-1, at use concentration Aquatic toxicity studies have shown that these systems are more than an order of magnitude less toxic to rainbow trout than conventional glyphosate systems. An in-vitro corneal toxicity study shows that the sarcosinate-based glyphosate systems exhibit no toxicity to bullock corneal tissue, while conventional formulations cause severe damage under the same conditions. The results of field studies, at elevated application rates, on glyphosate-tolerant corn shows that conventional glyphosate formulations can cause severe stunting and deformation of the

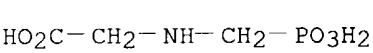
plants while the sarcosinate-based formulations cause no significant damage.
CC 5-3 (Agrochemical Bioregulators)
IT **1071-83-6**, Glyphosate **38641-94-0**, Roundup
RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
(N-acylsarcosinates as safe, effective and ecol.-friendly adjuvants for glyphosate)
IT **1071-83-6**, Glyphosate **38641-94-0**, Roundup
RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
(N-acylsarcosinates as safe, effective and ecol.-friendly adjuvants for glyphosate)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 38641-94-0 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, compd. with 2-propanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 1071-83-6
CMF C3 H8 N O5 P



CM 2

CRN 75-31-0
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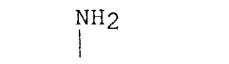
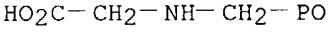


REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:15797 HCAPLUS
DOCUMENT NUMBER: 132:133541
TITLE: Effect of two adjuvant types on the distribution of 14C-glyphosate applied to model weed species
AUTHOR(S): Sharma, S. D.; Singh, M.
CORPORATE SOURCE: University of Florida's Citrus Research and Education Center, Lake Alfred, FL, 33850, USA
SOURCE: Brighton Conference--Weeds (1999), (Vol. 2), 729-734
CODEN: BCWEFI
PUBLISHER: British Crop Protection Council

DOCUMENT TYPE: Journal
LANGUAGE: English
AB Several model weed species, Sida spinosa, Abutilon theophrasti and Cassia obtusifolia, with varying amts. of polar waxes on their adaxial surface, were treated with 14C-glyphosate alone and formulated with X-77 and L-77 to determine the distribution pattern of 14C. The contact angle and 14C-distribution were significantly affected by both the presence of different waxes on plants and addition of adjuvants in a formulation of glyphosate. The **surface tension** values of L-77 alone and when added to the herbicide were minimal and so were contact angle values when measured on Teflon slide. Droplets of this solution spread quickly when measured on test leaves. The uptake and translocation of 14C-glyphosate decreased significantly as the percentage of polar waxes increased. However, these values were significantly higher with the addition of L-77 for all test species. This effect may be due to a minimal **surface tension**, contact angle, and/or solubilization of epicuticular waxes. Greenhouse efficacy evaluation trials with above formulations did not show a similar pattern, although a significantly higher percentage of control of test weed species was recorded when plants were sprayed with glyphosate formulated with an organosilicon.
CC 5-3 (Agrochemical Bioregulators)
IT **1071-83-6**, Glyphosate
RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
(effect of adjuvants and adaxial surface wax on distribution of glyphosate in weeds)
IT **1071-83-6**, Glyphosate
RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
(effect of adjuvants and adaxial surface wax on distribution of glyphosate in weeds)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:627970 HCAPLUS
DOCUMENT NUMBER: 125:295161
TITLE: Relationship of organosilicone adjuvant structure and phase behavior to activity enhancement of acifluorfen and glyphosate
AUTHOR(S): Burow, Richard F.; Penner, Donald; Roggenbuck, Frank C.; Hill, Randall M.
CORPORATE SOURCE: Dow Corning Corporation, Midland, MI, 48686-0994, USA
SOURCE: FRI Bulletin (1996), Volume Date 1995, 193(Proceedings of the Fourth International Symposium on Adjuvants for Agrochemicals, 1995), 54-59
CODEN: FRIBEJ; ISSN: 0111-8129
PUBLISHER: New Zealand Forest Research Institute
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A clear relationship has been established between organosilicone adjuvant structure and activity enhancement of water-soluble herbicides, such as

acifluorfen and glyphosate, on broadleaf weeds. Activity enhancement increases as the siloxane chain decreases in length. Enhancement of activity reaches a maximum when the average polyether chain-length is about 7. Thus, maximum activity enhancement and rain-fastness are achieved with the trisiloxane adjuvants having a polyether chain of 7 units. An acetyl terminal group on the polyether chain produces a somewhat greater enhancement with acifluorfen on velvetleaf, but not with glyphosate on velvetleaf. On giant foxtail with glyphosate, the greatest activity enhancement was achieved with hydrogen as the terminal atom on the polyether chain. Equilibrium **surface tension** values are not good predictors of the capacity of an organosilicone adjuvant to enhance herbicide activity. Ultra-low equilibrium **surface tension** appears to be a feature of organosilicone adjuvants exhibiting good herbicide activity enhancement and rain-fastness, yet some organosilicone adjuvants (S-4 and S-6) having low **surface tensions** did not produce optimal enhancement and consistent rain-fastness. Dynamic interfacial tensions against aliphatic hydrocarbon liqs. may be more useful to predict adjuvancy. Surfactant phase behavior appears to offer clues to the processes by which those organosilicone adjuvants function which offer the greatest enhancement. These are those which form a dispersion of a surfactant-rich phase (especially the lamellar liquid crystal phase) in the concentration range in which they are used.

CC 5-3 (Agrochemical Bioregulators)

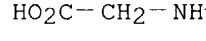
IT **Herbicides**
(relationship of organosilicone adjuvant structure and phase behavior to activity enhancement of acifluorfen and glyphosate)

IT **1071-83-6**, Glyphosate 50594-66-6, Acifluorfen
RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
(relationship of organosilicone adjuvant structure and phase behavior to activity enhancement of acifluorfen and glyphosate)

IT **1071-83-6**, Glyphosate
RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
(relationship of organosilicone adjuvant structure and phase behavior to activity enhancement of acifluorfen and glyphosate)

RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



L19 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:237200 HCAPLUS

DOCUMENT NUMBER: 122:3485

TITLE: Effect of adjuvants on rainfastness and herbicidal activity of glyphosate deposits on trembling aspen foliage

AUTHOR(S): Leung, John W.; Webster, Barrie G. R.

CORPORATE SOURCE: Natural Resources Canada, Forest Pest Management Institute, Sault Ste. Marie, ON, P6A 5M7, Can.

SOURCE: Journal of Environmental Science and Health, Part B: Pesticides, Food Contaminants, and Agricultural Wastes (1994), B29(6), 1169-201
CODEN: JPFCD2; ISSN: 0360-1234

PUBLISHER: Dekker

DOCUMENT TYPE: Journal
LANGUAGE: English

AB Radiolabeled end-use mixures of glyphosate with and without a cationic surfactant (Ethomeen T/25) and an organosilicone surfactant (Silwet L-77) were applied onto trembling aspen (Populus tremuloides) leaves at 1.0 kg of AE (acid equivalent) in 35 L/ha area of foliage. A 5-mm rainfall with an intensity of 10 mm/h was applied at intervals of 0.5, 8, 24, 36, 48, 72, and 96 h after treatment. Glyphosate washoff was determined by liquid scintillation counting of radioactivity in the rain-washing. At 36 h post-treatment, both the adjuvants significantly reduced glyphosate washoff (Ethomeen by 69.6% and Silwet by 59.7%) from foliage, compared to the washoff (82.6%) when Vision alone was applied without the adjuvants. Results of the rate of plant growth indicated that with a rain-free period of 8 h or more, the growth of most seedlings was stunted within 1 or 2 d. Percentage of foliar browning 20 d after treatment with rain-free period of 8 to 48 h ranged from 8 to 80% for Vision alone, 75 to 100% for Vision with Ethomeen, and 85 to 100% for Vision with Silwet, resp. Phys. properties of the end-use mixts. were measured with and without the two adjuvants to examine droplet spreading and drying rates in relation glyphosate rainfastness. The Silwet adjuvant lowered the **surface tension** of the end-use mixture, but Ethomenn did not. Droplets containing Silwet were spread more than those containing Ethomeen. However, the greater area of contact caused by Silwet did not contribute to a significant increase in the translocation rate of glyphosate into untreated parts of the seedlings, and showed no relationship with rainfastness of glyphosate deposits on trembling aspen.

CC 5-3 (Agrochemical Bioregulators)

IT **1071-83-6**, Glyphosate **38641-94-0**, Vision
RL: **AGR (Agricultural use)**; PRP (Properties); BIOL (Biological study); USES (Uses)
(effect of adjuvants on rainfastness and herbicidal activity of glyphosate deposits on trembling aspen foliage)

IT **1071-83-6**, Glyphosate **38641-94-0**, Vision
RL: **AGR (Agricultural use)**; PRP (Properties); BIOL (Biological study); USES (Uses)
(effect of adjuvants on rainfastness and herbicidal activity of glyphosate deposits on trembling aspen foliage)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 38641-94-0 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, compd. with 2-propanamine (1:1) (9CI) (CA INDEX NAME)

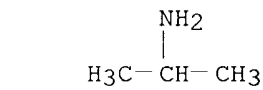
CM 1

CRN 1071-83-6
CMF C3 H8 N O5 P

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

CM 2

CRN 75-31-0
CMF C3 H9 N



L19 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1994:127628 HCAPLUS
DOCUMENT NUMBER: 120:127628
TITLE: Effect of organosilicone-based adjuvants on herbicide efficacy
AUTHOR(S): Singh, Megh; Maci, Robert E.
CORPORATE SOURCE: Citrus Res. Educ. Cent., Univ. Florida, Lake Alfred, FL, 33850, USA
SOURCE: Pesticide Science (1993), 38(2-3), 219-25
CODEN: PSSCBG; ISSN: 0031-613X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Laboratory and field expts. were conducted to evaluate the efficacy of the postemergence herbicides, fluazifop-P-Bu, glyphosate-isopropylammonium, paraquat, and glyphosate-trimesium (sulfosate) as influenced by organosilicone-based adjuvants, "Dyne-Amic" and "kinetic". Conventional adjuvants "Agri-Dex" and "Induce" were included in all expts. for comparison. The exptl. plots were naturally infested with bahiagrass, camphorweed, common lambsquarters, Florida pussley, Jerusalem oak, hairy beggarticks, pigweed, and teaweed. Herbicides were applied alone or in combination with "Dyne-Amic", "Kinetic", "Agri-dex", or "Induce" using a tractor-mounted boom sprayer. "Dyne-Amic" (2.5 mL/L) was as effective as "Agri-dex (10 mL/L) in increasing the efficacy of herbicides on grass and broadleaf weeds studied. "Kinetic" at 2.5 mL/L was as effective as "Induce" at 2.5 mL/L in increasing the efficacy of herbicides on the weeds studied. Paraquat tank-mixts. with the preemergence herbicides bromacil and diuron were more effective when applied at a spray volume of 280 L/ha than at 140 L/ha. Fluazifop-P-Bu and glyphosate-isopropylammonium were more effective at 186 than at 93 L/ha. Addition of "Kinetic" or "Induce" to the herbicide spray solution had no effect on pH, but fluazifop-P-Bu reduced pH to 5.1 or increased it to 7.7 when added to the 93 and 186 L ha-1 prepns., resp. Glyphosate-isopropylammonium reduced pH to 5.0 at the lower, but had little effect on pH at the higher rate. Reduction in static **surface tension** and contact angle was greater with organosilicone-based adjuvants than with conventional adjuvants.

CC 5-3 (Agrochemical Bioregulators)

IT **Herbicides**
(organosilicone adjuvants effect on efficacy of)

IT **Surface tension**
(static, organosilicone adjuvants reduction of)

IT 1910-42-5 8071-35-0, Krovar-I **38641-94-0**, Roundup 79241-46-6, Fusilade 2000 **81591-81-3**, Touchdown
RL: **AGR (Agricultural use)**; BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL

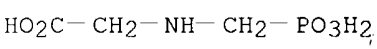
(Biological study); USES (Uses)
(herbicidal activity of, organosilicone adjuvants effect on)

IT **38641-94-0**, Roundup **81591-81-3**, Touchdown
RL: **AGR (Agricultural use)**; BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(herbicidal activity of, organosilicone adjuvants effect on)

RN 38641-94-0 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, compd. with 2-propanamine (1:1) (9CI) (CA INDEX NAME)

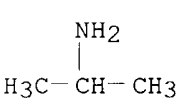
CM 1

CRN 1071-83-6
CMF C3 H8 N O5 P



CM 2

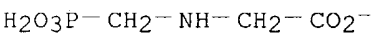
CRN 75-31-0
CMF C3 H9 N



RN 81591-81-3 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, ion(1-), trimethylsulfonium (9CI) (CA INDEX NAME)

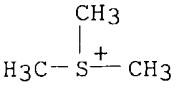
CM 1

CRN 81591-80-2
CMF C3 H7 N O5 P



CM 2

CRN 676-84-6
CMF C3 H9 S



L19 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1988:126549 HCAPLUS
DOCUMENT NUMBER: 108:126549
TITLE: The influence of different adjuvants on the phytotoxicity of glyphosate and fluazifop-p-butyl
AUTHOR(S): De Ruiter, H.; Hoekstra, J. R.; Uffing, A. J. M.
CORPORATE SOURCE: Cent. Agrobiol. Res., Wageningen, 6700 AA, Neth.
SOURCE: Mededelingen van de Faculteit Landbouwwetenschappen, Universiteit Gent (1987), 52(3B), 1217-24
CODEN: MFLRA3; ISSN: 0368-9697
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The soluble glyphosate and the insol. fluazifop-p-Bu were selected for this study. Both compds. are systemic and can move in both the phloem and xylem. Winter wheat is susceptible to both herbicides. The following adjuvants were selected: the cationic surfactant Armoblen T/25 (polyoxyethylene (15) alkylamine), the nonionic surfactant Agral LN (polyoxyethylene (8-9) nonylphenol), emulsified rape seed oil, Ulvapron (emulsified mineral oil), and ammonium sulfate. Armoblen T/25 increased the activity of glyphosate more than did Agral LN. Both surfactants enhance the activity of fluazifop-p-Bu. The difference in the amts. of surfactant added (the active ingredient) does not allow to compare the 2 surfactants. Ammonium sulfate increases the activity of glyphosate, whereas the activity of fluazifop-p-Bu is not influenced. Addition of the mineral oil decreased the glyphosate activity, whereas rape seed oil increased the glyphosate activity. However, both oils enhance the effect of fluazifop-p-Bu. Oil concns. >0.5% (volume/volume) are required for a maximal effect. Addition of the surfactants at 0.5% volume/volume and rape seed oil at 5 and 20% (volume/volume) increases the deposition on the difficult to wet wheat plants by 2-3-fold. Particularly with fluazifop-p-Bu the adjuvants enhance the deposition, whereas the **surface tension** is unaltered.

CC 5-3 (Agrochemical Bioregulators)

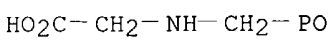
IT **38641-94-0**, Roundup 69806-50-4
RL: **AGR (Agricultural use)**; BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(herbicidal activity of, adjuvants effect on)

IT **38641-94-0**, Roundup
RL: **AGR (Agricultural use)**; BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(herbicidal activity of, adjuvants effect on)

RN 38641-94-0 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, compd. with 2-propanamine (1:1) (9CI) (CA INDEX NAME)

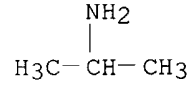
CM 1

CRN 1071-83-6
CMF C3 H8 N O5 P



CM 2

CRN 75-31-0
CMF C3 H9 N



L19 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1981:97987 HCAPLUS
DOCUMENT NUMBER: 94:97987
TITLE: Engineering improved chemical performance in plants
INVENTOR(S): Sampson, Michael James
PATENT ASSIGNEE(S): UK
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8002360	A1	19801113	WO 1980-GB87	19800512
W: AU, BR, DK, JP, US				
RW: AT, DE, FR, GB, NL, SE				
EP 28611	A1	19810520	EP 1980-900782	19800512
R: AT, DE, FR, GB, NL, SE				

PRIORITY APPLN. INFO.: GB 1979-16133 19790510
GB 1979-21035 19790616

AB The activity of plant growth regulators and herbicides is improved by the addition of surfactants at rates higher than those required for reducing **surface tension**. Coating agents might be included in the formulations. Thus, chlormequat [999-81-5] (460 g/L) reduced the stem height of wheat by 10.9%. When 0.75% alkyl phenol ethylene oxide condensate was added, height reduction was 13.5%.

IC A01N025-00; A01N025-32; A01N025-24; A01N043-40
CC 5-3 (Agrochemicals)
IT **Herbicides**
(surfactants enhancement of activity of)
IT **1071-83-6**
RL: **AGR (Agricultural use)**; BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(herbicidal activity of, surfactants in enhancement of)
IT **1071-83-6**
RL: **AGR (Agricultural use)**; BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(herbicidal activity of, surfactants in enhancement of)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

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=> d que
L30          12 SEA FILE=WPIX ABB=ON  PLU=ON  SOLID(3A)GLYPHOSAT? AND HERBICID?

L31           8 SEA FILE=WPIX ABB=ON  PLU=ON  L30 AND (SURFAC? OR TENSIO ACT?
                OR TENSIOACT?)


=> d bib abs 1-8

L31  ANSWER 1 OF 8  WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN   2004-317183 [30]   WPIX
DNC  C2004-120385
TI   Soluble solid dosage typed salt of glyphosate.
DC   C01
IN   REN, B; ZHENG, H; ZHOU, S
PA   (XINA-N) XINAN CHEM IND CO LTD ZHEJIANG
CYC  1
PI   CN 1462582      A  20031224 (200430)*
ADT  CN 1462582 A CN 2002-119480 20020527
PRAI CN 2002-119480       20020527
AN   2004-317183 [30]   WPIX
AB   CN   1462582 A UPAB: 20040511
     NOVELTY - Soluble glyphosate solid is prepared from
     glyphosate (20-80 weight%), surfactant (5-20 weight%) and
     filler (0-75 wt%) comprising ammonium sulfate, urea and potassium
     dihydrogen phosphate.
          USE - Used as herbicide.
     Dwg.0/0

L31  ANSWER 2 OF 8  WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN   2002-062001 [08]   WPIX
DNC  C2002-017647
TI   Solid herbicidal composition comprises flazasulfuron and
     glyphosate, glufosinate or bilanafos with surfactant and
     stabilizer.
DC   C01 C02
IN   MAEDA, M; SHIMIZU, M
PA   (ISHH) ISHIHARA SANGYO KAISHA LTD; (MAED-I) MAEDA M; (SHIM-I) SHIMIZU M
CYC  96
PI   WO 2001080644   A1 20011101 (200208)* JA   21
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            NL OA PT SD SE SL SZ TR TZ UG ZW
         W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
            DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
            LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD
            SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
     JP 2002012509   A  20020115 (200208)        8
     AU 2001052576   A  20011107 (200219)
     EP 1277405      A1 20030122 (200308)  EN
         R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
            RO SE SI TR
     BR 2001010399   A  20030408 (200329)
     US 2003100449   A1 20030529 (200337)
ADT  WO 2001080644 A1 WO 2001-JP3578 20010425; JP 2002012509 A JP 2001-111821
     20010410; AU 2001052576 A AU 2001-52576 20010425; EP 1277405 A1 EP
     2001-925914 20010425, WO 2001-JP3578 20010425; BR 2001010399 A BR
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2001-10399 20010425, WO 2001-JP3578 20010425; US 2003100449 A1 WO 2001-JP3578 20010425, US 2002-258449 20021024
FDT AU 2001052576 A Based on WO 2001080644; EP 1277405 A1 Based on WO 2001080644; BR 2001010399 A Based on WO 2001080644
PRAI JP 2000-125475 20000426
AN 2002-062001 [08] WPIX
AB WO 200180644 A UPAB: 20020204
NOVELTY - Solid **herbicidal** composition comprises:
(i) 1-(4,6-dimethoxypyrimidin-2-yl)-3-(3-trifluoromethyl-2-pyridylsulfonyl)urea (flazasulfuron) or its salt;
(ii) N-(phosphonomethyl)glycine (glyphosate), 4-(hydroxy(methyl)phosphinoyl)homoalanine (glufosinate) and/or 4-(hydroxy(methyl)phosphinoyl)homoalanylalanylalanine (bilanafos) or their salts;
(iii) a **surfactant**; and
(iv) a stabilizer.
ACTIVITY - **Herbicide**.
MECHANISM OF ACTION - None given in the source material.
USE - For use as a solid **herbicide**.
ADVANTAGE - The composition has improved stability.
Dwg.0/0

L31 ANSWER 3 OF 8 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2001-191392 [19] WPIX
DNC C2001-057302
TI Preparation of ammonium glyphosate paste for preparation of **herbicides**.
DC C01
IN KRAMER, R M; MASSMANN, B D; TOUSSAINT, M; WANG, J T; MASSMAN, B D; TOUSSAINT, M E; TOUSSANT, M
PA (MONS) MONSANTO EURO SA; (MONS) MONSANTO TECHNOLOGY LLC; (MONS) MONSANTO CO; (MONS) MONSANTO TECHNOLOGY LLP
CYC 94
PI WO 2001008492 A1 20010208 (200119)* EN 37
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W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2000064970 A 20010219 (200129)
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CZ 2002000254 A3 20020717 (200260)
KR 2002029079 A 20020417 (200268)
CN 1365254 A 20020821 (200281)
HU 2002002878 A2 20021228 (200308)
JP 2003505481 W 20030212 (200321) 45
ZA 2002000231 A 20030625 (200348) 44
US 6605568 B1 20030812 (200355)
MX 2002000979 A1 20030701 (200420)
ADT WO 2001008492 A1 WO 2000-US20485 20000727; AU 2000064970 A AU 2000-64970 20000727; BR 2000013186 A BR 2000-13186 20000727, WO 2000-US20485 20000727; EP 1199933 A1 EP 2000-952234 20000727, WO 2000-US20485 20000727; CZ 2002000254 A3 WO 2000-US20485 20000727, CZ 2002-254 20000727; KR

2002029079 A KR 2002-700378 20020110; CN 1365254 A CN 2000-810916 20000727; HU 2002002878 A2 WO 2000-US20485 20000727, HU 2002-2878 20000727; JP 2003505481 W WO 2000-US20485 20000727, JP 2001-513239 20000727; ZA 2002000231 A ZA 2002-231 20020110; US 6605568 B1 Provisional US 1999-146243P 19990728, US 2000-627078 20000727; MX 2002000979 A1 WO 2000-US20485 20000727, MX 2002-979 20020125

FDT AU 2000064970 A Based on WO 2001008492; BR 2000013186 A Based on WO 2001008492; EP 1199933 A1 Based on WO 2001008492; CZ 2002000254 A3 Based on WO 2001008492; HU 2002002878 A2 Based on WO 2001008492; JP 2003505481 W Based on WO 2001008492; MX 2002000979 A1 Based on WO 2001008492

PRAI US 1999-146243P 19990728; US 2000-627078 20000727

AN 2001-191392 [19] WPIX

AB WO 200108492 A UPAB: 20010829

NOVELTY - Preparation of ammonium glyphosate (I) paste comprises mixing 1 weight part **solid**, particulate **glyphosate** acid (II), 0.8-1.25 mole equivalents ammonia per mole (I) and 10-25 weight% water, in a vessel, causing reaction of (I) and ammonia, generating heat causing partial evaporation of water to give a paste having a moisture content of 5-20 weight%.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) the preparation of a dry granular **herbicidal** composition comprising:

(a) mixing 1 weight part particulate glyphosate acid (II), 0.8-1.25 mole equivalents ammonia per mole (I) and 10-25 weight% water, in a vessel, causing reaction of (I) and ammonia, generating heat causing partial evaporation of water to form a paste and then, if the paste has a moisture content greater than 15 weight% applying heat and/or vacuum to reduce the moisture content of the paste to 5-15 weight%;

(b) adding , with mixing, one or more **surfactants** in a weight ratio of **surfactant**:(I) of 1:9-1:3 to form an extrudable wet mix;

(c) extruding the wet mix to form extrudate strands that break to form moist coherent granules;

(d) drying the granules to produce a dry granular formulation; and

(2) the paste prepared by either of the above processes.

ACTIVITY - **Herbicides**.

MECHANISM OF ACTION - None given.

USE - For preparation of ammonium glyphosate paste suitable or downstream processing to prepare dry, water-soluble granular **herbicides** optionally

ADVANTAGE - Reaction is completed with greater speed than prior art process, requiring much shorter residence times fog glyphosate in the reaction vessel, one-tenth or less of the residence time required by solid state processes, making it practical on a manufacturing scale to operate the process in continuous mode rather than batch mode.

DESCRIPTION OF DRAWING(S) - The figure shows the process flow diagram.

Dwg.1/4

L31 ANSWER 4 OF 8 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2001-182838 [18] WPIX

DNC C2001-054549

TI New process for preparation of ammonium glyphosate flakes.

DC C01 C07

IN KRAMER, R M

PA (MONS) MONSANTO CO; (MONS) MONSANTO TECHNOLOGY LLC; (MONS) MONSANTO

TECHNOLOGY LLP
CYC 95
PI WO 2001008491 A1 20010208 (200118)* EN 21
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2000063781 A 20010219 (200129)
EP 1199932 A1 20020502 (200236) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
BR 2000012841 A 20020507 (200238)
CZ 2002000253 A3 20020814 (200263)
KR 2002029077 A 20020417 (200268)
CN 1365255 A 20020821 (200281)
HU 2002002390 A2 20021128 (200309)
JP 2003505480 W 20030212 (200321) 29
EP 1199932 B1 20030326 (200323) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
DE 60001838 E 20030430 (200336)
ZA 2001010538 A 20030528 (200341) 27
US 6599858 B1 20030729 (200354)
MX 2002001082 A1 20020901 (200370)
ADT WO 2001008491 A1 WO 2000-US20337 20000726; AU 2000063781 A AU 2000-63781 20000726; EP 1199932 A1 EP 2000-950717 20000726, WO 2000-US20337 20000726; BR 2000012841 A BR 2000-12841 20000726, WO 2000-US20337 20000726; CZ 2002000253 A3 WO 2000-US20337 20000726, CZ 2002-253 20000726; KR 2002029077 A KR 2002-700376 20020110; CN 1365255 A CN 2000-811043 20000726; HU 2002002390 A2 WO 2000-US20337 20000726, HU 2002-2390 20000726; JP 2003505480 W WO 2000-US20337 20000726, JP 2001-513238 20000726; EP 1199932 B1 EP 2000-950717 20000726, WO 2000-US20337 20000726; DE 60001838 E DE 2000-00001838 20000726, EP 2000-950717 20000726, WO 2000-US20337 20000726; ZA 2001010538 A ZA 2001-10538 20011221; US 6599858 B1 Provisional US 1999-146261P 19990729, US 2000-703077 20000725; MX 2002001082 A1 WO 2000-US20337 20000726, MX 2002-1082 20020129
FDT AU 2000063781 A Based on WO 2001008491; EP 1199932 A1 Based on WO 2001008491; BR 2000012841 A Based on WO 2001008491; CZ 2002000253 A3 Based on WO 2001008491; HU 2002002390 A2 Based on WO 2001008491; JP 2003505480 W Based on WO 2001008491; EP 1199932 B1 Based on WO 2001008491; DE 60001838 E Based on EP 1199932, Based on WO 2001008491; MX 2002001082 A1 Based on WO 2001008491
PRAI US 1999-146261P 19990729; US 2000-703077 20000725
AN 2001-182838 [18] WPIX
AB WO 200108491 A UPAB: 20010402
NOVELTY - Preparation of ammonium glyphosate (I) flakes comprises:
(a) mixing 1 weight part **solid**, particulate **glyphosate** acid (II), water and a base;
(b) allowing the base to react with (II);
(c) drying by contact with a heated **surface** to form, primarily by evaporation of water, a solid deposit on the heated **surface**; and
(d) scraping the solid deposit off the heated **surface** to recover dry flakes of (I).
DETAILED DESCRIPTION - Preparation of ammonium glyphosate (I) flakes

comprises:

(a) mixing 1 weight part **solid**, particulate **glyphosate** acid (II), 0.5-3 weight parts water and a base that supplies 0.8-1.25 moles equivalents ammonia per mole (I);

(b) allowing the base to react with (II);

(c) drying by contact with a heated **surface** to form, primarily by evaporation of water, a solid deposit on the heated **surface**; and

(d) scraping the solid deposit off the heated **surface** to recover dry flakes of (I).

An INDEPENDENT CLAIM is also included for the ammonium glyphosate flakes.

ACTIVITY - **Herbicide**.

MECHANISM OF ACTION - None given.

USE - For production of **herbicidal** ammonium glyphosate flakes for further processing, e.g. milling to form a powder. The powder or flakes are used in granulation processes optionally involving **surfactants** or for use as **herbicides** by dissolving in water to form **herbicide** solutions.

ADVANTAGE - The flakes dissolve rapidly and completely in water and the flakes break readily to form smaller flakes, but are non-dusty.

DESCRIPTION OF DRAWING(S) - The figure shows the process flow diagram.

Dwg.1/1

L31 ANSWER 5 OF 8 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2001-182836 [18] WPIX
DNC C2001-054547
TI Preparation of ammonium glyphosate powder useful as a **herbicide**.
DC C01 C07
IN KRAMER, R M
PA (MONS) MONSANTO CO; (MONS) MONSANTO TECHNOLOGY LLC; (MONS) MONSANTO TECHNOLOGY LLP
CYC 94
PI WO 2001008480 A1 20010208 (200118)* EN 48
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2000063783 A 20010219 (200129)
EP 1199927 A1 20020502 (200236) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
BR 2000012839 A 20020430 (200237)
CZ 2002000255 A3 20020814 (200263)
US 6448434 B1 20020910 (200263)
KR 2002029078 A 20020417 (200268)
CN 1365252 A 20020821 (200281)
HU 2002002337 A2 20021128 (200309)
JP 2003505477 W 20030212 (200321) 60
ZA 2001010543 A 20030528 (200341) 53
EP 1199927 B1 20030716 (200354) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
AU 763848 B 20030731 (200359)

DE 60003929 E 20030821 (200362)
MX 2002001083 A1 20020901 (200370)

ADT WO 2001008480 A1 WO 2000-US20340 20000726; AU 2000063783 A AU 2000-63783 20000726; EP 1199927 A1 EP 2000-950719 20000726, WO 2000-US20340 20000726; BR 2000012839 A BR 2000-12839 20000726, WO 2000-US20340 20000726; CZ 2002000255 A3 WO 2000-US20340 20000726, CZ 2002-255 20000726; US 6448434 B1 Provisional US 1999-146281P 19990729, US 2000-624949 20000725; KR 2002029078 A KR 2002-700377 20020110; CN 1365252 A CN 2000-811041 20000726; HU 2002002337 A2 WO 2000-US20340 20000726, HU 2002-2337 20000726; JP 2003505477 W WO 2000-US20340 20000726, JP 2001-513228 20000726; ZA 2001010543 A ZA 2001-10543 20011221; EP 1199927 B1 EP 2000-950719 20000726, WO 2000-US20340 20000726; AU 763848 B AU 2000-63783 20000726; DE 60003929 E DE 2000-00003929 20000726, EP 2000-950719 20000726, WO 2000-US20340 20000726; MX 2002001083 A1 WO 2000-US20340 20000726, MX 2002-1083 20020129

FDT AU 2000063783 A Based on WO 2001008480; EP 1199927 A1 Based on WO 2001008480; BR 2000012839 A Based on WO 2001008480; CZ 2002000255 A3 Based on WO 2001008480; HU 2002002337 A2 Based on WO 2001008480; JP 2003505477 W Based on WO 2001008480; EP 1199927 B1 Based on WO 2001008480; AU 763848 B Previous Publ. AU 2000063783, Based on WO 2001008480; DE 60003929 E Based on EP 1199927, Based on WO 2001008480; MX 2002001083 A1 Based on WO 2001008480

PRAI US 1999-146281P 19990729; US 2000-624949 20000725

AN 2001-182836 [18] WPIX

AB WO 200108480 A UPAB: 20010402

NOVELTY - Preparation of ammonium glyphosate (I) powder comprises:

(a) mixing 1 weight part **solid**, particulate **glyphosate** acid (II) with parts water

(b) allowing the base to react with (II);

(c) drying to recover a particulate solid (I); and

(d) accelerating the particulate solid in a turbulent high-velocity gas stream, to form by particle-particle attrition, an ammonium glyphosate powder having a mean particle size 5-20 mu m.

DETAILED DESCRIPTION - Preparation of ammonium glyphosate (I) powder comprises:

(a) mixing 1 weight part **solid**, particulate **glyphosate** acid (II), 0.5-3 weight parts water and a base that supplies 0.8-1.25 moles equivalents ammonia per mole (I);

(b) allowing the base to react with (II);

(c) drying to recover a particulate solid (I);

(d) accelerating the particulate solid in a turbulent high-velocity gas stream, to form by particle-particle attrition, an ammonium glyphosate powder having a mean particle size 5-20 mu m; and optionally

(e) mixing 75-90 weight parts (I) powder with 10-25 weight parts one or more **surfactants** and 3-10 weight parts water to form an extrudable wet mix;

(f) extruding the wet mix to form exudates strands that break to form moist coherent granules; and

(g) drying the granules to produce a dry granular formulation.

ACTIVITY - **Herbicide**.

MECHANISM OF ACTION - None given.

USE - For production of ammonium glyphosate **herbicides**.

ADVANTAGE - The product has good storage properties without caking and good flowability.

DESCRIPTION OF DRAWING(S) - The figure shows the process flow diagram.

Dwg.1/1

L31 ANSWER 6 OF 8 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1996-302072 [31] WPIX
DNC C1996-095969
TI **Solid herbicidal** compsn contg **glyphosate** and oxyfluorfen - prepd using soln of oxyfluorfen in **surfactant** -solvent mixture to prevent crystal formation..
DC A97 C01 C03
IN KUCHIKATA, M; SATO, T; TOUSSAINT, M E
PA (MONS) MONSANTO EURO SA; (MONS) MONSANTO EURO SA NV
CYC 19
PI EP 719500 A1 19960703 (199631)* EN 9
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
AU 9539028 A 19960711 (199635)
EP 719500 B1 19980708 (199831) EN
R: BE DE ES FR GB GR IT PT
DE 69411573 E 19980813 (199838)
ES 2120599 T3 19981101 (199851)
AU 705685 B 19990527 (199932)
US 6083875 A 20000704 (200036)
ADT EP 719500 A1 EP 1994-870215 19941230; AU 9539028 A AU 1995-39028 19951124; EP 719500 B1 EP 1994-870215 19941230; DE 69411573 E DE 1994-611573 19941230, EP 1994-870215 19941230; ES 2120599 T3 EP 1994-870215 19941230; AU 705685 B AU 1995-39028 19951124; US 6083875 A US 1995-576417 19951221
FDT DE 69411573 E Based on EP 719500; ES 2120599 T3 Based on EP 719500; AU 705685 B Previous Publ. AU 9539028
PRAI EP 1994-870215 19941230
AN 1996-302072 [31] WPIX
AB EP 719500 A UPAB: 20010124
A solid **herbicidal** compsn comprises: (a) oxyfluorfen (OFF)dissolved in at least (i) an alkoxylated acetylenic diol **surfactant**, (ii) a polyoxyalkylene alkyl ether **surfactant** , (iii) an alkoxylated organosilicone-based **surfactant** (iv) a phosphate solvent of low water solubility and opt (v) solvents other than (iv), the wt ratio of total solvent to OFF being less than 3 to 1; (b) N-phosphonomethylglycine (NPMG) and opt an acid acceptor, or a water-soluble salt of NPMG; and opt (c) an inorganic carrier. Component (a) is separately claimed.

USE - Use of the compsn is claimed for killing or controlling unwanted vegetation, by application to plants after dilution. NPMG (glyphosate) is an effective non-selective **herbicide**, which is combined with OFF (2-chloro- alpha , alpha , alpha -trifluoro-p-tolyl 3-ethoxy-4-nitrophenyl ether, a known selective **herbicide**) to accelerate the appearance of visual symptoms and improve broadleaf weed control.

ADVANTAGE - By use of the specific solvent system in the OFF premix (a), OFF crystal formation in the compsn is (almost) completely inhibited on storage. The compsn thus gives a clear or translucent mixt on dilution with water and a spray with a very fine OFF particle size. Problems such as clogging of spray equipment, reduced bioefficacy, non-homogeneous spray mixts and reduced OFF concn in the spray (see EP448538) are prevented. Dwg.0/0

L31 ANSWER 7 OF 8 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1992-284355 [34] WPIX
DNC C1992-126452
TI Dry, water soluble or dry, water dispersible agricultural compsn. -

comprises non-reacted N-phosphono methyl-glycine and an acid acceptor for controlling or killing weeds.

DC C01
IN PRILL, E J; RICHARDSON, R O
PA (MONS) MONSANTO CO
CYC 36
PI WO 9212637 A1 19920806 (199234)* EN 59
RW: AT BE CH DE DK ES FR GB GR IT LU MC NL OA SE
W: AU BB BG BR CA CS FI HU JP KP KR LK MG MN MW NO PL RO RU SD
AU 9213595 A 19920827 (199247)
EP 568635 A1 19931110 (199345) EN
R: AT BE CH DE DK ES FR GB GR IT LI LU MC NL SE
BR 9205569 A 19940510 (199422)
AU 649797 B 19940602 (199427)
JP 06505256 W 19940616 (199428) 4
EP 568635 B1 19970319 (199716) EN 15
R: AT BE CH DE DK ES FR GB GR IT LI LU MC NL SE
DE 69218411 E 19970424 (199722)
ES 2101088 T3 19970701 (199736)
ADT WO 9212637 A1 WO 1992-US274 19920115; AU 9213595 A AU 1992-13595 19920115, WO 1992-US274 19920115; EP 568635 A1 EP 1992-905285 19920115, WO 1992-US274 19920115; BR 9205569 A BR 1992-5569 19920115, WO 1992-US274 19920115; AU 649797 B AU 1992-13595 19920115; JP 06505256 W JP 1992-505681 19920115, WO 1992-US274 19920115; EP 568635 B1 EP 1992-905285 19920115, WO 1992-US274 19920115; DE 69218411 E DE 1992-618411 19920115, EP 1992-905285 19920115, WO 1992-US274 19920115; ES 2101088 T3 EP 1992-905285 19920115
FDT AU 9213595 A Based on WO 9212637; EP 568635 A1 Based on WO 9212637; BR 9205569 A Based on WO 9212637; AU 649797 B Previous Publ. AU 9213595, Based on WO 9212637; JP 06505256 W Based on WO 9212637; EP 568635 B1 Based on WO 9212637; DE 69218411 E Based on EP 568635, Based on WO 9212637; ES 2101088 T3 Based on EP 568635
PRAI US 1991-645365 19910124; US 1991-804592 19911213
AN 1992-284355 [34] WPIX
AB WO 9212637 A UPAB: 19931113
A substantially dry, water soluble or dry, water dispersible agricultural compsn. comprises a **herbicidal** amount of non-reacted N-phosphonomethylglycine, and an acid acceptor.

Pref., the compsn. further comprises a solid or liquid **surfactant** in amount of 0.2-15.0 weight% and selected from nonionic **surfactants** include polyoxyethylene-polyoxypropylene block copolymer, anionic **surfactants** include sodium laurylsulphate, sodium alpha-olefin sulphonate. Cationic **surfactants** include ethoxylated fatty amines, amine oxides, such as lauryl dimethylamine oxide, and/or amphoteric **surfactants**. The compsn. also comprises a dispersing agent or a corrosion inhibitor, a thickener, a calcium sequestrant and/or a defoamer, an ammonium salt or other synergist, a quick-burn additive, a humectant, a dye or pigment, or a co-**herbicide**.

USE/ADVANTAGE - The compsn. can be used to kill or control weeds and is better than the current aqueous formulations. Advantages include higher active **glyphosate** content, compatibility with **solid** or water-insoluble liquid additives, compatibility with solid and liquid water insoluble co-**herbicides** as powder or water soluble granules, use of lower cost packaging and eliminating the necessity of mfg. a glyphosate salt prior to formulation of the final commercial product

Dwg.0/0

ABEQ EP 568635 A UPAB: 19931220
Compsn. comprises a **herbicidal** amt. of non-reacted N-phosphonomethylglycine, and an acid acceptor.
Pref., the compsn. further comprises a solid or liq. **surfactant** in amt. of 0.2-15.0 wt.% and selected from nonionic **surfactants** including polyoxyethylene-polyoxypropylene block copolymer, anionic **surfactants** including sodium laurylsulphate and sodium alpha-olefin sulphonate, cationic **surfactants** including ethoxylated fatty amines, amine oxides, such as lauryl dimethylamine oxide, and/or amphoteric **surfactants**. The compsn. also comprises a dispersing agent or a corrosion inhibitor, a thickener, a calcium sequestrant and/or a defoamer, an ammonium salt or other synergist, a quick-burn additive, a humectant, a dye or pigment, or a co-**herbicide**.
USE/ADVANTAGE - The compsn. can be used to kill or control weeds and is better than the current aq. formulations. Advantages include higher active **glyphosate** content, compatibility with **solid** or water-insoluble liq. additives, compatibility with solid and liq. water insol. co-**herbicides** as powder or water soluble granules, use of lower cost packaging and eliminating the necessity of mfg. a glyphosate salt prior to formulation of the final commercial product.
ABEQ EP 568635 B UPAB: 19970417
A substantially dry, effervescent water soluble, agriculturally acceptable composition comprising a **herbicidally** effective amount of substantially non reacted N-phosphonomethylglycine, and a carbonate based acid acceptor in such an extend as to neutralise N-phosphonomethylglycine when the composition is poured into water.
Dwg.0/0

L31 ANSWER 8 OF 8 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1992-018299 [03] WPIX
CR 1990-337105 [45]
DNC C1992-007900
TI Concentrate compsn. used as **herbicide** - contains N-phosphono-methyl-glycine as suspension in (hydro)-organic solvent containing di (oxyalkylene)-amine type activator.
DC C01
IN DOOKHITH, M; LINARES, H
PA (RHON) RHONE POULENC AGROCHIMIE
CYC 1
PI FR 2661315 A 19911031 (199203)*
ADT FR 2661315 A FR 1990-5601 19900426
PRAI FR 1989-6075 19890502; FR 1990-5601 19900426
AN 1992-018299 [03] WPIX
CR 1990-337105 [45]
AB FR 2661315 A UPAB: 19940622
Concn formulations containing N-phosphonomethylglycine (glyphosate) and/or its derivs. as a suspension in an organic or hydro-organic solvent are claimed. The concentrate of glyphosate and/or one of its derivs., having a solubility in water greater than 5 g/l pref. greater than 9 g/l, is at least 100 g/l, part of this being insol. in the medium, pref. 120-250 (160-220) g/l. The proportion of glyphosate not dissolved is above 30% pref. above 75%.
Pref. glyphosate deriv(s). is a sodium, potassium, or ammonium salt or an organic salt, especially isopropyl ammonium or sulphonium, alone or mixed.
The insol. **solid** particles of **glyphosate** or its derivative

have a dia. less than 30 (1-20) microns. The **surfactant** present, having the properties of an activator is a cpd. of formula (I), where R = 8-22C alkyl or alkenyl chain, straight or branched, A = alkylene gp., pref. ethylene or propylene, n-n' = 2-40, pref. 16-30, pref. 20-25, R' = H or acyl, e.g. formyl, acetyl, propanoyl or benzoyl. An adjuvant may be present e.g. an ammonium salt (nitrate, phosphate, sulphamate, thiocyanate or sulphate) at 100-500 (200-350) g/l. Compsns. are diluted with water for spreading at 100-600 l/ha, the the active ingredient being applied at 0.125-1.5 kg/ha.

USE/ADVANTAGE - Glyphosate and its derivs. are **herbicides**. Compsns. are fine dispersions which do not settle out, and may contain all the solid and liquid additives normally used in such formulations, e.g. stabilisers, sequestrants, other **herbicides**, etc. @(19pp)

Compsns. are fine dispersions which do not settle out, and may contain all the solid and liquid additives normally used in such formulations, e.g. stabilisers, sequestrants, other **herbicides**, etc.

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L5              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  N-PHOSPHONOMETHYLGLYCINE/CN
L6                STR
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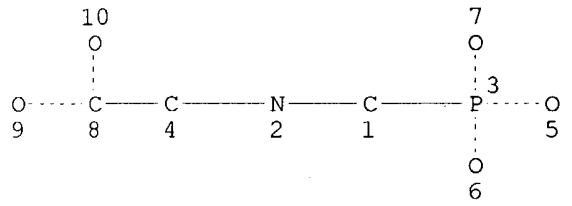


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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  10

STEREO ATTRIBUTES: NONE
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                  116775-21-4/CRN OR 119495-36-2/CRN OR 121407-09-8/CRN OR
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                  124973-84-8/CRN OR 124973-85-9/CRN OR 124973-87-1/CRN OR
                  124974-04-5/CRN OR 124974-06-7/CRN OR 124974-07-8/CRN OR
                  124974-08-9/CRN OR 125019-04-7/CRN OR 125019-05-8/CRN OR
                  125119-93-9/CRN OR 125204-64-0/CRN OR 125204-65-1/CRN OR
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L10           783 SEA FILE=REGISTRY ABB=ON  PLU=ON  L8 OR L9
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L20          35 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L10(L)SOLID
L21          14 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L20 AND L15

=> d l21 ibib ab hitind hitstr 1-14

L21  ANSWER 1 OF 14  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2004:430601  HCAPLUS
DOCUMENT NUMBER:          140:401765
TITLE:                    Solid herbicidal glyphosate formulation
INVENTOR(S):              Vigil, Jorge Gustavo; Ruiz, Martha Maria Del Carmen;
                          Anacabe, Dante Omar
PATENT ASSIGNEE(S):       Argent.
SOURCE:                   U.S. Pat. Appl. Publ., 5 pp.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.   DATE
     ---------------   ----  --------       ---------------   --------
     US 2004102323      A1   20040527       US 2003-714870    20031118
PRIORITY APPLN. INFO.:                     AR 2002-104441   A  20021119
AB   A solid herbicidal formulation of glyphosate is described, in powder,
     granule, or flake form, soluble or dispersible in water, containing glyphosate
in
     the form of hydrosol. salt and also including 5-30% weight % of one or more
     surfactants, soluble in water, compatible with glyphosate and which are solid
     at ambient temperature, i.e. at approx. 25°.
IC   ICM  A01N057-18
     ICS  A01N025-12
NCL  504206000; 504367000
CC   5-3 (Agrochemical Bioregulators)
IT   Herbicides
     Pesticide formulations
        (solid herbicidal glyphosate formulation)
IT   1071-83-6, Glyphosate 34494-03-6, Glyphosate monosodium
     salt 39600-42-5, Glyphosate monopotassium salt
     40465-66-5, Glyphosate monoammonium salt
     RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
        (solid herbicidal glyphosate formulation)
IT   1071-83-6, Glyphosate 34494-03-6, Glyphosate monosodium
     salt 39600-42-5, Glyphosate monopotassium salt
     40465-66-5, Glyphosate monoammonium salt
     RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
        (solid herbicidal glyphosate formulation)
RN   1071-83-6  HCAPLUS
CN   Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI)  (CA INDEX NAME)
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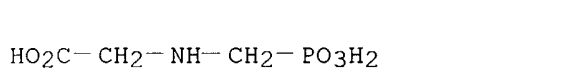

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RN   34494-03-6  HCAPLUS
CN   Glycine, N-(phosphonomethyl)-, monosodium salt (9CI)  (CA INDEX NAME)
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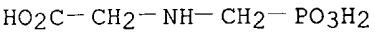
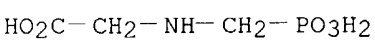


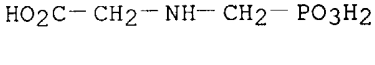
● Na

RN 39600-42-5 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, monopotassium salt (9CI) (CA INDEX NAME)



● K

RN 40465-66-5 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, monoammonium salt (9CI) (CA INDEX NAME)



● NH_3

L21 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:59567 HCAPLUS
DOCUMENT NUMBER: 140:106970
TITLE: Solid adjuvants for agrochemicals comprising surfactants and fillers
INVENTOR(S): Schnabel, Gerhard; Maier, Thomas; Thuaud, Caroline; Krause, Hans-peter; Bickers, Udo
PATENT ASSIGNEE(S): Germany
SOURCE: U.S. Pat. Appl. Publ., 17 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004013678	A1	20040122	US 2003-619065	20030711
DE 10231615	A1	20040205	DE 2002-10231615	20020712
WO 2004006671	A1	20040122	WO 2003-EP6933	20030630

W: AE, AG, AL, AM, AU, AZ, BA, BB, BR, BY, BZ, CA, CN, CO, CR, CU, DM, DZ, EC, GD, GE, HR, ID, IL, IN, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MA, MD, MG, MK, MN, MX, NI, NO, NZ, OM, PG, PH, PL, RU, SC, SG, SY, TJ, TM, TN, TT, UA, US, UZ, VC, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: DE 2002-10231615 A 20020712

OTHER SOURCE(S): MARPAT 140:106970

AB The present invention relates to a solid adjuvant comprising (a) one or more surfactants of the formula Ar-O-(CHR1-CHR2-O-)y-R3 (Ar = aryl, substituted by at least two (C1-C30)alkyls; R1 = H or (C1-C6)alkyl; R2 = H or (C1-C6)alkyl; R3 = H, (un)substituted (C1-C30) hydrocarbon, sulfonate, phosphonate, or acyl; y = 1-100), and (b) one or more fillers. The adjuvant is particularly suitable in the field of crop protection.

IC ICM A61K039-00

NCL 424184100

CC 5-6 (Agrochemical Bioregulators)

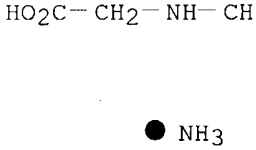
IT **Herbicides**
(solid adjuvants comprising surfactants and fatty acids, for)

IT 13684-56-5, Desmedipham 13684-63-4, Phenmedipham 26225-79-6, Ethofumesate **40465-66-5** 41394-05-2, Metamitron 51276-47-2, Glufosinate 71283-80-2 83164-33-4, Diflufenican
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(**solid** adjuvants comprising surfactants and fatty acids, for)

IT **40465-66-5**
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(**solid** adjuvants comprising surfactants and fatty acids, for)

RN 40465-66-5 HCAPLUS

CN Glycine, N-(phosphonomethyl)-, monoammonium salt (9CI) (CA INDEX NAME)



L21 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:1004976 HCAPLUS

DOCUMENT NUMBER: 140:5625

TITLE: Stable nonaqueous suspensions of solid particles in polyalkylene glycols

INVENTOR(S): Harris, William Franklin

PATENT ASSIGNEE(S): Benchmark Research and Technology, USA

SOURCE: U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U.S. Ser. No. 771,226.
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002193256	A1	20021219	US 2001-905358	20010713

US 6743756 B2 20040601
US 2002019318 A1 20020214 US 2001-771226 20010126
WO 2003006135 A2 20030123 WO 2002-US22114 20020711
WO 2003006135 A3 20030410
WO 2003006135 C2 20040429
W: AE, AG, AL, AM, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CN, CO, CR, CU, CZ, DM, DZ, EC, EE, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR
EP 1406712 A2 20040414 EP 2002-744865 20020711
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
US 2003220203 A1 20031127 US 2003-441500 20030520
PRIORITY APPLN. INFO.: US 2001-771226 A2 20010126
US 2000-198922P P 20000421
US 2001-905358 A 20010713
WO 2002-US22114 W 20020711

AB A nonaq. suspension comprises (a) solid particles, (b) a polyalkylene glycol, and (c) a suspension stabilizer comprising hydrogenated castor oil or wax. The suspensions of particles in non-aqueous solvents are extremely stable over long periods of time with min. separation of the solvent and no hard packing of the dispersed particles. The suspensions enable a user to rapidly add the suspension to water and mix at low speeds without generating fugitive dust in the process. The suspensions are environmentally safe, biodegradable and may be used in environmentally sensitive applications, such as drilling fluids for offshore areas. A composition comprising the nonaq. suspension can be used as an environmental chemical, an agricultural chemical, a paper production chemical, a textile chemical, an ingredient in a construction or building product (such as paint, cement, textured finishing compound), a cosmetic ingredient, a hair spray component, a gelatin substitute, a ceramic material, a cleaning composition, a polish, an ink, a fire extinguishing chemical, a metalworking chemical, an adhesive chemical, an explosive chemical, a flocculant, a water purification compound, a binder chemical for sand, ores or coal, or an oil field chemical

IC ICM E21B001-00
NCL 507200000
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 5

IT Agrochemicals
Cement
Ceramics
Flocculants
Fungicides
Herbicides
Pesticides
(particles; nonaq. suspensions of solid particles in polyalkylene glycols)

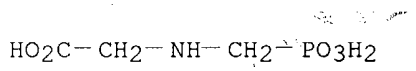
IT 75-60-5, Cacodylic acid 75-99-0, Dalapon 127-20-8, 2,2-Dichloropropionic acid, sodium salt **1071-83-6**, Glyphosate 1918-00-9, Dicamba 7773-06-0, Ammonium sulfamate 72178-02-0, Fomesafen
RL: TEM (Technical or engineered material use); USES (Uses)

(herbicide, particles; nonaq. suspensions of **solid** particles in polyalkylene glycols)

IT **1071-83-6**, Glyphosate
RL: TEM (Technical or engineered material use); USES (Uses)
(herbicide, particles; nonaq. suspensions of **solid** particles in polyalkylene glycols)

RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



L21 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:797994 HCAPLUS
DOCUMENT NUMBER: 135:328381
TITLE: Solid herbicidal composition
INVENTOR(S): Maeda, Masaru; Shimizu, Manabu
PATENT ASSIGNEE(S): Ishihara Sangyo Kaisha, Ltd., Japan
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001080644	A1	20011101	WO 2001-JP3578	20010425
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
JP 2002012509	A2	20020115	JP 2001-111821	20010410
AU 2001052576	A5	20011107	AU 2001-52576	20010425
EP 1277405	A1	20030122	EP 2001-925914	20010425
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001010399	A	20030408	BR 2001-10399	20010425
US 2003100449	A1	20030529	US 2002-258449	20021024

PRIORITY APPLN. INFO.: JP 2000-125475 A 20000426
WO 2001-JP3578 W 20010425

AB A solid herbicidal composition is presented comprising (1) 1-(4,6-dimethoxypyrimidin-2-yl)-3-(3-trifluoromethyl-2- pyridyl-sulfonyl)urea or a salt thereof, (2) at least one member selected from the group consisting of N-(phosphono-methyl)glycine, 4-[hydroxy(methyl)phosphinyl]homo-alanine, 4-[hydroxy(methyl)phosphinyl]homo-alanylalanylalanine, and salts thereof, (3) a surfactant, and (4) a stabilizer.

IC ICM A01N047-36
ICS A01N057-20; A01N025-08; A01N025-12

CC 5-3 (Agrochemical Bioregulators)

IT **Herbicides**
(in solid herbicidal composition)
IT **1071-83-6**, N-(Phosphono-methyl)glycine **1071-83-6D**, N-(Phosphono-methyl)glycine, salts 35597-43-4 35597-43-4D, salts 35597-44-5 35597-44-5D, salts 104040-78-0 104040-78-0D, salts
RL: AGR (Agricultural use); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(in **solid** herbicidal composition)
IT **1071-83-6**, N-(Phosphono-methyl)glycine **1071-83-6D**, N-(Phosphono-methyl)glycine, salts
RL: AGR (Agricultural use); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(in **solid** herbicidal composition)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:725402 HCAPLUS
DOCUMENT NUMBER: 133:292309
TITLE: Preparation of solid water-soluble compositions containing glyphosate salt and an inorganic filler supported by a film-forming polymer
INVENTOR(S): Landham, Rowena Roshanthi; Oza, Mrinalini Sachin
PATENT ASSIGNEE(S): Zeneca Limited, UK
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000059301	A1	20001012	WO 2000-GB829	20000308

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RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1168915 A1 20020109 EP 2000-907838 20000308
EP 1168915 B1 20040512
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
JP 2003502444 T2 20030121 JP 2000-608878 20000308
PRIORITY APPLN. INFO.: GB 1999-7668 A 19990401
WO 2000-GB829 W 20000308

AB A solid, water-soluble or water-dispersible composition comprising a non film-forming component (A), which is a salt of glyphosate, bipyridylium salt, glufosinate, formesafen and/or ammonium sulfate (a filler), which is supported by a film-forming polymer (B), which is a partially or fully charged homopolymer or a partially charged block copolymer or a homopolymer or block copolymer capable of ring-opening to form a partially charged homopolymer or block copolymer is prepared by mixing A and B in an aqueous medium and drying it. The preferred film-forming polymer is alkyl vinylether maleic anhydride block co-polymer or a hydrolyzed form thereof.

IC ICM A01N025-10
ICS A01N057-20; A01N043-90; A01N043-40; A01N041-10; A01N025-34

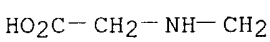
CC 5-3 (Agrochemical Bioregulators)
Section cross-reference(s): 36

IT **Herbicides**
Pesticide formulations
(solid water-soluble composition containing glyphosate salt)

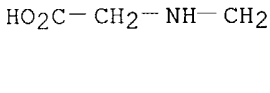
IT 85-00-7, Diquat dibromide **1071-83-6D**, Glyphosate, salt **40465-66-5**, Ammonium glyphosate 51276-47-2, Glufosinate **70901-12-1**, Glycine, N-(phosphonomethyl)-, potassium salt 72178-02-0, Fomesafen **81591-81-3**, Glyphosate-Trimesium
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(in **solid** water-soluble agrochem. composition supported by a film-forming polymer)

IT **1071-83-6D**, Glyphosate, salt **40465-66-5**, Ammonium glyphosate **70901-12-1**, Glycine, N-(phosphonomethyl)-, potassium salt **81591-81-3**, Glyphosate-Trimesium
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(in **solid** water-soluble agrochem. composition supported by a film-forming polymer)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 40465-66-5 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, monoammonium salt (9CI) (CA INDEX NAME)



RN 70901-12-1 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, potassium salt (9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

●x K

RN 81591-81-3 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, ion(1-), trimethylsulfonium (9CI) (CA INDEX NAME)

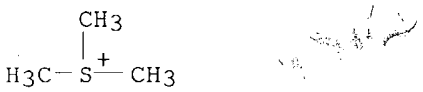
CM 1

CRN 81591-80-2
CMF C3 H7 N O5 P

$H_2O_3P-CH_2-NH-CH_2-CO_2^-$

CM 2

CRN 676-84-6
CMF C3 H9 S



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:107263 HCAPLUS
DOCUMENT NUMBER: 132:118778
TITLE: Manufacture of soluble glyphosate solid herbicide
INVENTOR(S): Zhang, Hongxiu
PATENT ASSIGNEE(S): Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 8 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1181881	A	19980520	CN 1997-107058	19970724
CN 1061813	B	20010214		

PRIORITY APPLN. INFO.: CN 1997-107058 19970724
AB The solid herbicide is comprised of glyphosate 30-60%, surfactant SDP 5-10%, synergists (NH4)2SO4 8-20% and urea 10-30%, and filler to 100%, preferably glyphosate 20%, SDP 9%, (NH4)2SO4 15%, urea 25%, and Na2SO4 to

100%.
IC ICM A01N059-10
ICS A01N025-18
CC 5-3 (Agrochemical Bioregulators)
IT Agrochemical formulations
Herbicides
(manufacture of soluble glyphosate solid herbicide)
IT **1071-83-6**, Glyphosate
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(manufacture of soluble glyphosate **solid** herbicide)
IT **1071-83-6**, Glyphosate
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(manufacture of soluble glyphosate **solid** herbicide)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

L21 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:753003 HCAPLUS
DOCUMENT NUMBER: 131:333424
TITLE: Solid water-soluble or water-dispersible herbicide compositions
INVENTOR(S): Landham, Rowena Roshanthi; Oza, Mrinalini Sachin
PATENT ASSIGNEE(S): Zeneca Limited, UK
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9959407	A1	19991125	WO 1999-GB1559	19990517
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9940506	A1	19991206	AU 1999-40506	19990517
EP 1083791	A1	20010321	EP 1999-923743	19990517
EP 1083791	B1	20020724		
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JP 2002515405	T2	20020528	JP 2000-549090	19990517
AT 220854	E	20020815	AT 1999-923743	19990517
PT 1083791	T	20021129	PT 1999-923743	19990517

ES 2177277	T3	20021201	ES 1999-923743	19990517
US 6528569	B1	20030304	US 2000-674386	20001030
PRIORITY APPLN. INFO.:			GB 1998-10861	A 19980526
			WO 1999-GB1559	W 19990517

AB A composition for producing a solid, water-soluble or water-dispersible herbicidal formulation comprises a non film-forming material, for example a water-soluble electrolyte herbicide, such as a glyphosate salt, supported by a film-forming polymer such as polyvinylpyrrolidone. The process comprises: preparing a film-forming aqueous medium containing (a) the film-forming polymer; (b) the water-soluble material which is non film-forming; (c) a water-miscible solvent in which the film-forming polymer is soluble and optionally (d) a solid filler, and thereafter drying the film-forming aqueous medium to form the solid composition

IC ICM A01N025-34
ICS A01N043-40; A01N057-20

CC 5-3 (Agrochemical Bioregulators)

IT **Herbicides**
Pesticide formulations
(solid water-soluble or water-dispersible herbicide compns. containing)

IT **1071-83-6D**, Glyphosate, salts **38641-94-0**, Roundup
51276-47-2D, Glufosinate, salts **70901-12-1**, Glycine, N-(phosphonomethyl). potassium salt 72178-02-0, Fomesafen **81591-81-3**, Glyphosate trimesium **114370-14-8**, Glycine, N-(phosphonomethyl). ammonium salt
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**solid** water-soluble or water-dispersible herbicide compns.)

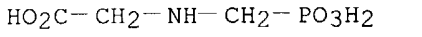
IT **1071-83-6D**, Glyphosate, salts **38641-94-0**, Roundup **70901-12-1**, Glycine, N-(phosphonomethyl). potassium salt **81591-81-3**, Glyphosate trimesium **114370-14-8**, Glycine, N-(phosphonomethyl). ammonium salt
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**solid** water-soluble or water-dispersible herbicide compns.)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

RN 38641-94-0 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, compd. with 2-propanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

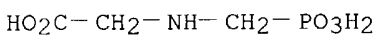
CRN 1071-83-6
CMF C3 H8 N O5 P



CM 2

CRN 75-31-0
CMF C3 H9 N

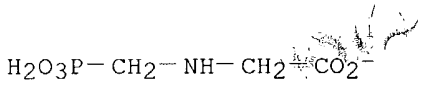
RN 70901-12-1 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, potassium salt (9CI) (CA INDEX NAME)



RN 81591-81-3 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, ion(1-), trimethylsulfonium (9CI) (CA INDEX NAME)

CM 1

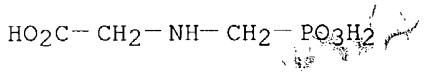
CRN 81591-80-2
CMF C3 H7 N O5 P



CM 2

CRN 676-84-6
CMF C3 H9 S

RN 114370-14-8 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, ammonium salt (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:343312 HCAPLUS
DOCUMENT NUMBER: 130:334159
TITLE: Non-aqueous suspension concentrates of highly water-soluble solid agrochemicals
INVENTOR(S): Pallas, Norman Robert; Hazen, James L.; Riedemann, Robert Jene; Ruch, Thomas E.
PATENT ASSIGNEE(S): Rhodia Inc., USA
SOURCE: U.S., 7 pp., Cont.-in-part of U.S. 5,707,551.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

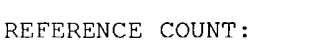
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5906962	A	19990525	US 1997-926920	19970910
US 5707551	A	19980113	US 1994-362057	19941222
PT 891135	T	20020930	PT 1995-944708	19960320

PRIORITY APPLN. INFO.: US 1994-362057 A2 19941222
CA 1996-2249576 A 19960320
WO 1995-IB1172 19960320

AB Stable, concentrated nonaq. suspensions of water-soluble solids are prepared by using a water-soluble agrochem. dispersed in water-miscible organic liquid carriers, preferably lower alkanediols in conjunction with a specific three-component surfactant system, i.e., a system comprising a nonionic polymeric viscosity-modifier surfactant; an anionic surfactant; and a nonionic surfactant having a bulky hydrophobic substituent group.

IC ICM A01N025-04
ICS A01N037-10; A01N037-18; B01J013-00
NCL 504116000
CC 5-4 (Agrochemical Bioregulators)
IT Antibacterial agents
Fungicides
Herbicides
Pesticides
(nonaq. suspension concs. of highly water-soluble solid agrochems.)
IT 57-13-6, Urea, biological studies 60-51-5, Dimethoate 75-60-5, Cacodylic acid 127-20-8, Dalapon sodium **1071-83-6**, Glyphosate 1918-00-9, Dicamba 2275-23-2, Vamidothion 6484-52-2, Ammonium nitrate, biological studies 6980-18-3, Kasugamycin 7558-79-4, Disodium hydrogen phosphate 7722-76-1, Ammonium phosphate 7757-79-1, Potassium nitrate, biological studies 7758-98-7, Copper(II) sulfate, biological studies 7773-06-0, Ammonium sulfamate 7778-77-0 10043-35-3, Boric acid, biological studies 16752-77-5, Methomyl 30560-19-1, Acephate 34681-10-2, Butocarboxim 39148-24-8, Fosetyl-Al 52207-48-4, Dimehypo 71626-11-4, Benalaxyl 72178-02-0 108173-90-6, Guazatine
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(nonaq. suspension concs. of highly water-soluble **solid** agrochems.)
IT **1071-83-6**, Glyphosate
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(nonaq. suspension concs. of highly water-soluble **solid**

agrochems.)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:113411 HCAPLUS
DOCUMENT NUMBER: 126:119351
TITLE: Manufacture of ammonium glyphosate via a gas-solid reaction system
INVENTOR(S): Day, Thomas Mccabe; Gillespie, Jane Laura; Kramer, Richard Melvyn
PATENT ASSIGNEE(S): Passley, Paul Leonard, USA
SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9640697	A1	19961219	WO 1996-US3082	19960305
W: AM, AU, AZ, BB, BG, BR, BY, CA, CN, CZ, EE, GE, HU, IS, JP, KG, KR, KZ, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5633397	A	19970527	US 1995-485316	19950607
CA 2221299	AA	19961219	CA 1996-2221299	19960305
CA 2221299	C	20010605		
AU 9654195	A1	19961230	AU 1996-54195	19960305
AU 704518	B2	19990422		
EP 832086	A1	19980401	EP 1996-911255	19960305
EP 832086	B1	20001011		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI				
CN 1192742	A	19980909	CN 1996-196133	19960305
CN 1068008	B	20010704		
JP 10511688	T2	19981110	JP 1996-500437	19960305
BR 9608561	A	19990706	BR 1996-8561	19960305
AT 196908	E	20001015	AT 1996-911255	19960305
ES 2152019	T3	20010116	ES 1996-911255	19960305
JP 3126032	B2	20010122	JP 1997-500437	19960305
RU 2164518	C2	20010327	RU 1998-100186	19960305
IL 118576	A1	20000928	IL 1996-118576	19960605
ZA 9604774	A	19970108	ZA 1996-4774	19960606

PRIORITY APPLN. INFO.: US 1995-485316 A 19950607
WO 1996-US3082 W 19960305

AB Solid N-phosphonomethylglycine (glyphosate acid) (I) in wet cake form is charged to a suitable mixer/reactor equipped with a jacket cooled with H2O or other suitable heat transfer facilitating means and a stoichiometric equivalent of anhydrous NH3(g) is fed to the mixer for direct reaction with I as it is agitated within the mixer. The moisture content of the glyphosate wet cake, the design of the mixer including a preferred close tolerance relation between the inner walls of the reactor and its mixing impellers together with the relative location of the NH3(g) inlet in the mixer/reactor and maintenance of a reaction temperature of ≤60° are all important process variables. The ammonium glyphosate thereby produced is a highly sorptive, H2O-soluble powder suitable for end use as a plant growth regulator or as a herbicide without further processing. Due to the highly sorptive character of the reaction product, it is particularly well-suited for further formulation to absorb/adsorb a high level of adjuvants, e.g., wetting agents, anti-foaming agents and, in particular, surfactants.

IC ICM C07F009-38

CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
Section cross-reference(s): 5

IT **Herbicides**
(manufacture of herbicidal ammonium glyphosate using a gas-solid reaction system for neutralization of glyphosate acid with ammonia gas)

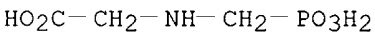
IT **40465-66-5P**, Ammonium glyphosate
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of herbicidal ammonium glyphosate using a gas-**solid** reaction system for neutralization of glyphosate acid with ammonia gas)

IT **1071-83-6**, N-Phosphonomethylglycine
RL: RCT (Reactant); RACT (Reactant or reagent)
(manufacture of herbicidal ammonium glyphosate using a gas-**solid** reaction system for neutralization of glyphosate acid with ammonia gas)

IT **40465-66-5P**, Ammonium glyphosate
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of herbicidal ammonium glyphosate using a gas-**solid** reaction system for neutralization of glyphosate acid with ammonia gas)

RN 40465-66-5 HCAPLUS

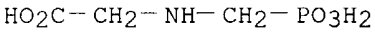
CN Glycine, N-(phosphonomethyl)-, monoammonium salt (9CI) (CA INDEX NAME)



IT **1071-83-6**, N-Phosphonomethylglycine
RL: RCT (Reactant); RACT (Reactant or reagent)
(manufacture of herbicidal ammonium glyphosate using a gas-**solid** reaction system for neutralization of glyphosate acid with ammonia gas)

RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



L21 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:113408 HCAPLUS
DOCUMENT NUMBER: 126:119350
TITLE: Manufacture of herbicidal ammonium glyphosate using aqueous ammonium hydroxide in a liquid-solid reaction system
INVENTOR(S): Passley, Paul Leonard; Day, Thomas McCabe; Gillespie, Jane Laura; Kramer, Richard Melvyn; Lindemann, Ralph Elmer, Jr.
PATENT ASSIGNEE(S): Passley, Paul Leonard, USA
SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

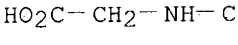
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9640696	A1	19961219	WO 1996-US3081	19960305
W: AM, AU, AZ, BB, BG, BR, BY, CA, CN, CZ, EE, GE, HU, IS, JP, KG, KR, KZ, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5614468	A	19970325	US 1995-472152	19950607
CA 2221298	AA	19961219	CA 1996-2221298	19960305
CA 2221298	C	20010605		
AU 9656620	A1	19961230	AU 1996-56620	19960305
AU 694877	B2	19980730		
EP 845000	A1	19980603	EP 1996-913769	19960305
EP 845000	B1	20010516		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI				
JP 10507467	T2	19980721	JP 1996-500436	19960305
JP 2963543	B2	19991018		
CN 1192743	A	19980909	CN 1996-196134	19960305
CN 1068601	B	20010718		
BR 9608562	A	19990706	BR 1996-8562	19960305
RU 2164519	C2	20010327	RU 1998-100223	19960305
ES 2157441	T3	20010816	ES 1996-913769	19960305
PT 845000	T	20010928	PT 1996-913769	19960305
IN 181799	A	19980926	IN 1996-MA389	19960312
IN 181847	A	19981003	IN 1996-MA390	19960312
IL 118577	A1	20010520	IL 1996-118577	19960605
ZA 9604775	A	19970108	ZA 1996-4775	19960606
US 5716903	A	19980210	US 1997-778890	19970103
GR 3036355	T3	20011130	GR 2001-401207	20010808

PRIORITY APPLN. INFO.: US 1995-472152 A 19950607
WO 1996-US3081 W 19960305

AB Solid N-phosphonomethylglycine (glyphosate acid) (I) is charged to a closed system and partially pre-dried by continuously recirculating it through a hot air grinding/drying system. A cooled solution of NH4OH is then metered into and reacted with the partially dried I as it is being

recirculated in a manner such that the moisture content of the reaction mass so formed is continuously decreased throughout the reaction. Following completion of the NH4OH addition, a powdered reaction product having a moisture content of .apprx.2% is formed. At this stage, the ammonium glyphosate product is suitable for end use and it can be readily dissolved in H2O and immediately used as a herbicide or plant growth regulator. Due to its highly sorptive character this product is capable to be further formulated into a product highly loaded with adjuvants and particularly surfactants.

IC ICM C07F009-38
CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
Section cross-reference(s): 5
IT **Herbicides**
(manufacture of herbicidal ammonium glyphosate using aqueous ammonium hydroxide
in a liquid-solid reaction system for neutralization of glyphosate acid)
IT **40465-66-5P**, Ammonium glyphosate
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of herbicidal ammonium glyphosate using aqueous ammonium hydroxide
in a liquid-**solid** reaction system for neutralization of glyphosate acid)
IT **1071-83-6**, N-Phosphonomethylglycine 1336-21-6, Ammonium hydroxide
RL: RCT (Reactant); RACT (Reactant or reagent)
(manufacture of herbicidal ammonium glyphosate using aqueous ammonium hydroxide
in a liquid-**solid** reaction system for neutralization of glyphosate acid)
IT **40465-66-5P**, Ammonium glyphosate
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of herbicidal ammonium glyphosate using aqueous ammonium hydroxide
in a liquid-**solid** reaction system for neutralization of glyphosate acid)
RN 40465-66-5 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, monoammonium salt (9CI) (CA INDEX NAME)



IT **1071-83-6**, N-Phosphonomethylglycine
RL: RCT (Reactant); RACT (Reactant or reagent)
(manufacture of herbicidal ammonium glyphosate using aqueous ammonium hydroxide
in a liquid-**solid** reaction system for neutralization of glyphosate acid)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

L21 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:438066 HCAPLUS
DOCUMENT NUMBER: 125:107779
TITLE: Solid glyphosate plus oxyfluorfen herbicide formulations
INVENTOR(S): Sato, Tatsuo; Kuchikata, Masuo; Toussaint, Marc Emile
PATENT ASSIGNEE(S): Monsanto Europe SA, Belg.
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 719500	A1	19960703	EP 1994-870215	19941230
EP 719500	B1	19980708		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
ES 2120599	T3	19981101	ES 1994-870215	19941230
AU 9539028	A1	19960711	AU 1995-39028	19951124
AU 705685	B2	19990527		
US 6083875	A	20000704	US 1995-576417	19951221

PRIORITY APPLN. INFO.: EP 1994-870215 A 19941230

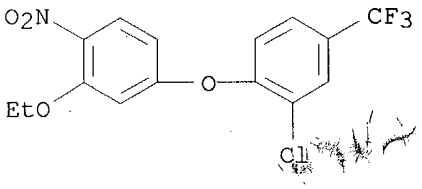
AB The invention relates to a solid herbicidal composition comprising oxyfluorfen dissolved in at least an alkoxylated acetylenic diol surfactant and a polyoxyalkylene alkyl ether surfactant or an alkoxylated organosilicon surfactant and a phosphate solvent of low water solubility, the ratio by weight of phosphate solvent to oxyfluorfen being lower than 3 to 1; and a water-soluble glyphosate salt, and optionally an inorg. carrier. The prefered alkoxylated acetylenic diol surfactant is Surfynol 465.

IC ICM A01N057-20
ICS A01N033-22
ICI A01N057-20, A01N057-14, A01N033-22, A01N025-30, A01N025-14, A01N025-08; A01N033-22, A01N057-14, A01N025-30, A01N025-02
CC 5-3 (Agrochemical Bioregulators)
IT **Herbicides**
(solid glyphosate plus oxyfluorfen herbicide formulations)
IT 42874-03-3D, Oxyfluorfen, mixts. with glyphosate salts **105884-68-2**, Oxyfluorfen-glyphosate mixture **178823-77-3**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**solid** glyphosate plus oxyfluorfen herbicide formulations)
IT **105884-68-2**, Oxyfluorfen-glyphosate mixture **178823-77-3**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**solid** glyphosate plus oxyfluorfen herbicide formulations)
RN 105884-68-2 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, mixt. with 2-chloro-1-(3-ethoxy-4-nitrophenoxy)-4-(trifluoromethyl)benzene (9CI) (CA INDEX NAME)

CM 1

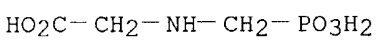
CRN 42874-03-3

CMF C15 H11 Cl F3 N O4



CM 2

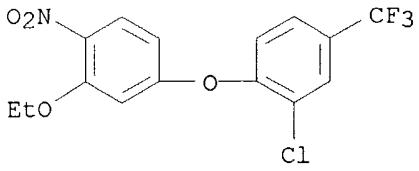
CRN 1071-83-6
CMF C3 H8 N O5 P



RN 178823-77-3 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, monoammonium salt, mixt. with 2-chloro-1-(3-ethoxy-4-nitrophenoxy)-4-(trifluoromethyl)benzene (9CI) (CA INDEX NAME)

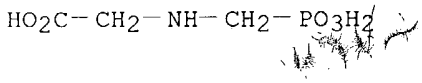
CM 1

CRN 42874-03-3
CMF C15 H11 Cl F3 N O4



CM 2

CRN 40465-66-5
CMF C3 H8 N O5 P . H3 N



L21 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:350899 HCAPLUS

DOCUMENT NUMBER: 122:125971
TITLE: Solid agricultural adjuvants for pesticides.
INVENTOR(S): Chasin, David G.; Davis, Ronald I.
PATENT ASSIGNEE(S): USA
SOURCE: Can. Pat. Appl., 20 pp.
CODEN: CPXXEB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2093377	AA	19941006	CA 1993-2093377	19930405

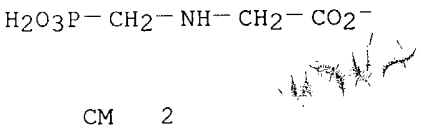
PRIORITY APPLN. INFO.: CA 1993-2093377 19930405

AB Solid, free-flowing adjuvants for use with agricultural chems., such as pesticides, are formed by phys. combining urea with at ≥1 surfactant selected from ethoxylated aliphatic alcs. or acids having at least 10 mol of ethylene oxide per mol of acid or alc. and 8-24 carbon atoms in the acid or alc. chain; block or random copolymers of ethylene oxide and propylene oxide ; a block or random copolymers of ethylene oxide and propylene oxide based on aliphatic alcs. having 4-18 carbon atoms. These adducts may also include other fertilizers, such as diammonium phosphate; acidifying agents, such as anionic phosphate esters of the formula ROP(O)(OH)2, wherein R is alkyl, alkyaryl, alkoxylated alkyl, or alkoxylated alkylaryl; and/or sticking agents, such as fatty acids of alkoxylated novolac resins. The adducts are formed by mixing and heating the components to a uniform liquid melt and then cooling the adduct into a solid, free-flowing powder. The adjuvants may be built-in or tank mixed or dry blended with pesticide formulations. They function as activator adjuvants, compatibilizers, buffers, dispersants, wetting and/or sticking agents. Thus, an adjuvant was prepared by heating a mixture of polyoxyethylene tridecyl alc. 50, urea 48 and water 2 weight% at 120°. This adjuvant enhanced the herbicidal activity of sulfosate against common weeds.

IC ICM A01N025-30
ICS A01N025-24; A01N025-14; C05G003-00
CC 5-3 (Agrochemical Bioregulators)
Section cross-reference(s): 19
IT Agrochemical formulations
Herbicides
Pesticides
(solid agricultural adjuvants for pesticides containing fertilizers and surfactants)
IT **81591-81-3**, Sulfosate
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**solid** agricultural adjuvants for herbicides containing fertilizers and surfactants)
IT **81591-81-3**, Sulfosate
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**solid** agricultural adjuvants for herbicides containing fertilizers and surfactants)
RN 81591-81-3 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, ion(1-), trimethylsulfonium (9CI) (CA INDEX NAME)

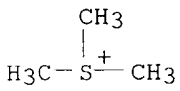
CM 1

CRN 81591-80-2
CMF C3 H7 N O5 P



CM 2

CRN 676-84-6
CMF C3 H9 S



L21 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1990:567391 HCAPLUS
DOCUMENT NUMBER: 113:167391
TITLE: Solid formulations of N-phosphonomethyl-N-carboxymethyl herbicides
INVENTOR(S): Chan, Jimmy H.; Djafar, Roger R.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 10 pp. Cont.-in-part of U.S. Ser. No. 50,445, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4931080	A	19900605	US 1988-145152	19880119
ZA 8603985	A	19870225	ZA 1986-3985	19860528
DD 259127	A5	19880817	DD 1986-290675	19860528
SK 278212	B6	19960403	SK 1986-3901	19860528
US 5580841	A	19961203	US 1994-314579	19940928

PRIORITY APPLN. INFO.:
US 1985-738708 19850529
US 1985-762466 19850805
US 1987-50455 19870518
US 1988-145152 19880119
US 1990-531439 19900513
US 1992-883224 19920507

OTHER SOURCE(S): MARPAT 113:167391

AB N-Phosphonomethyl-N-carboxymethyl compds. are mixed with a molten nonionic surfactant and solvent, followed by solvent-evaporation and cooling, to give a solid formulation. A mixture of 12.5 g molten Tetronic 908 (ethylene oxide-propylene oxide block copolymer) and 42.5 g 58% aqueous trimethylsulfonium N-phosphonomethylglycine solution was heated at 95° under vacuum, to give, after water evaporation, a stable solid formulation. The composition (2.4 g) dissolved in 400 mL water controlled Johnson grass

(Sorghum halepense) and other weeds, when applied postemergence at 0.5 lb/acre.

IC ICM A01N025-00
NCL 071087000
CC 5-3 (Agrochemical Bioregulators)
IT **Herbicides**
(phosphonomethylcarboxymethyl compds., solid formulations of)
IT **1071-83-6** 2439-99-8, N,N-Bis(Phosphonomethyl)glycine
38641-94-0 81591-81-3
RL: PROC (Process)
(herbicide formulation of, **solid**)
IT **1071-83-6 38641-94-0 81591-81-3**
RL: PROC (Process)
(herbicide formulation of, **solid**)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 38641-94-0 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, compd. with 2-propanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 1071-83-6
CMF C3 H8 N O5 P

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

CM 2

CRN 75-31-0
CMF C3 H9 N

$H_3C-CH(NH_2)-CH_3$

RN 81591-81-3 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, ion(1-), trimethylsulfonium (9CI) (CA INDEX NAME)

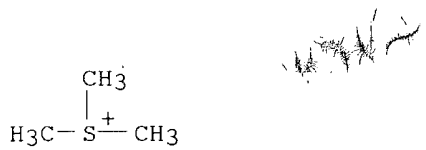
CM 1

CRN 81591-80-2
CMF C3 H7 N O5 P

$H_2O_3P-CH_2-NH-CH_2-CO_2^-$

CM 2

CRN 676-84-6
CMF C3 H9 S



L21 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1988:217798 HCAPLUS
DOCUMENT NUMBER: 108:217798
TITLE: Solid phytoactive compositions comprising a N-phosphonomethyl-N-carboxymethyl compound
INVENTOR(S): Djafar, Roger Rachid; Benke, Alan Henry
PATENT ASSIGNEE(S): Stauffer Chemical Co., USA
SOURCE: Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 256608	A2	19880224	EP 1987-201554	19870817
EP 256608	A3	19890308		
EP 256608	B1	19920408		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE				
DK 8704192	A	19880219	DK 1987-4192	19870812
DK 170456	B1	19950911		
JP 63051307	A2	19880304	JP 1987-200123	19870812
JP 08025849	B4	19960313		
BR 8704213	A	19880412	BR 1987-4213	19870813
CA 1309266	A1	19921027	CA 1987-544516	19870814
FI 8703549	A	19880219	FI 1987-3549	19870817
FI 85322	B	19911231		
FI 85322	C	19920410		
NO 8703454	A	19880219	NO 1987-3454	19870817
NO 172023	B	19930222		
NO 172023	C	19930602		
ZA 8706068	A	19881026	ZA 1987-6068	19870817
HU 47952	A2	19890428	HU 1987-3693	19870817
HU 205614	B	19920528		
IL 83571	A1	19910718	IL 1987-83571	19870817
AT 74487	E	19920415	AT 1987-201554	19870817
ES 2032290	T3	19930201	ES 1987-201554	19870817
RU 2038790	C1	19950709	RU 1987-4203108	19870817
US 5047079	A	19910910	US 1988-233257	19880718

PRIORITY APPLN. INFO.: US 1986-897240 19860818
EP 1987-201554 19870817

AB Preparation of a solid, phytoactive composition comprises: (a) reacting an acid form

of a phytoactive N-phosphonomethyl-N-carboxymethyl compound with a liquid amine to form the amine salt; (b) admixing the amine salt with a molten surfactant, the surfactant being solid at ambient temps.; and (c) cooling the mixture to a temperature below the m.p. of the surfactant to form a composition
comprising the surfactant and the amine salt of N-phosphonomethyl-N-carboxylmethyl compound interdispersed in the matrix thereof and which is solid at ambient temps. N-phosphonomethylglycine isopropylamine salt (42.5 g) was added to molten 12.5 g Tetronic 908 (ethylene oxide-propylene oxide block copolymer) to give a solid composition

IC ICM A01N025-14
ICS A01N057-20

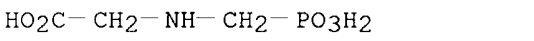
CC 5-3 (Agrochemical Bioregulators)

IT Defoliants
Herbicides
Plant hormones and regulators
RL: BIOL (Biological study)
(phosphonomethylcarboxymethyl compound formulations, solid)

IT **1071-83-6D**, N-Phosphonomethylglycine, amine salts 2439-99-8D, N,N-Bis(phosphonomethyl)glycine, amine salts **38641-94-0**, N-Phosphonomethylglycine isopropylamine salt
RL: PROC (Process)
(**solid** formulations of)

IT **1071-83-6D**, N-Phosphonomethylglycine, amine salts
38641-94-0, N-Phosphonomethylglycine isopropylamine salt
RL: PROC (Process)
(**solid** formulations of)

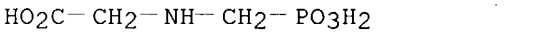
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 38641-94-0 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, compd. with 2-propanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 1071-83-6
CMF C3 H8 N O5 P



CM 2

CRN 75-31-0
CMF C3 H9 N